

VERSION WITH MARKINGS TO SHOW CHANGES MADE

U.S. PATENT APPLICATION SER. NO. 09/114,962
ACCOMPANYING AMENDMENT OF MARCH 18, 2002

IN THE CLAIMS:

Please amend claims 16, 19, 21 and 22 as follows.

16. (Amended Three Times) An airbag safety restraint system for a vehicle comprising:

an inflatable airbag having an interior,

an inflator assembly having an inflator housing, an ignitable gas generating material contained in said inflator housing and at least one passage extending between said gas generating material and said interior of said airbag such that upon ignition of said gas generating material, gas is generated and flows through said at least one passage into said interior of said airbag to inflate said airbag, and

an electronic crash sensor for causing ignition of said gas generating material upon a determination of a crash requiring inflation of said airbag,

said crash sensor comprising

a sensor housing situated exterior of said inflator housing,

an accelerometer comprising a sensing mass arranged in said sensor housing to move relative to said sensor housing in response to accelerations of said sensor housing resulting from the crash, said accelerometer including a piezo-electric element for generating a signal representative of the movement of said sensing mass [being generated], and

a micro-processor comprising an algorithm for determining whether the movement of said sensing mass over time results in a calculated value which is in excess of a threshold value based on the signal such that if the movement over time of said sensing mass results in a calculated value which is in excess of the threshold value, said micro-processor causes ignition of gas generating material and thus inflation of said airbag.

19. (Amended) The system of claim [18] 16, wherein the sensing mass is a micro-machined element.

21. (Twice Amended) The system of claim [18] 16, wherein said inflator assembly further comprises a primer arranged in said inflator housing for igniting said gas generating material, said crash sensor including an electronic circuit including said accelerometer and said primer such that upon movement of said sensing mass over time resulting in a calculated value in excess of the threshold value, the electronic circuit is completed thereby causing ignition of said primer.

22. (Amended Three Times) An airbag safety restraint system for a vehicle comprising:

an inflatable airbag having an interior,

an inflator assembly having an inflator housing, an ignitable gas generating material contained in said inflator housing and at least one passage extending between said gas generating material and said interior of said airbag such that upon ignition of said gas generating material, gas is generated and flows through said at least one passage into said interior of said airbag to inflate said airbag, and

an electronic crash sensor for causing ignition of said gas generating material upon a determination of a crash requiring inflation of said airbag,

said crash sensor comprising

a sensor housing situated exterior of said inflator housing, and

an accelerometer arranged in said sensor housing and including a sensing mass movable relative to said sensor housing in response to accelerations of said sensor housing resulting from the crash, said accelerometer [being] including a piezo-electric element arranged to generate a signal representative of the movement of said sensing mass over time, said crash sensor being arranged to cause

ignition of said gas generating material if the movement over time of said sensing mass represented by said signal results in a calculated value which is in excess of a threshold value.